

THE TWENTY-SIXTH
ANNUAL REPORT

TO THE

Bedlingtonshire

URBAN

District Council,

FOR THE YEAR 1899,

BY

DANIEL CARMICHAEL, F.R.C.S.E.,

Medical Officer of Health.

*PRINTED BY ORDER OF THE URBAN DISTRICT
COUNCIL.*

Bedlington :

E. H. METCALF, PRINTER, &c., FRONT STREET.

1900.



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To the Chairman and Members
OF THE
Bedlingtonshire Urban District Council.

MR. CHAIRMAN AND GENTLEMEN,

Herewith I beg to submit to you my Twenty-Sixth Annual Report on the health and sanitary condition of your district in 1899.

The principal features of the year were—First, a prolonged epidemic of Gastroenteritis, which continued from the Spring quarter to the end of the year, causing several deaths. Second, an epidemic of Measles in the Summer quarter at Cambois, and in the Winter quarter at Choppington ; and Third, a severe epidemic of Influenza, complicated with Pneumonia, which continued the whole year. Typhoid Fever has also been prevalent in the district.

In the year ending 31st December, 1899, there were 741 births and 401 deaths registered in the Urban District of Bedlingtonshire.

The birth rate is 41 and the death rate 22 per 1000.

The population according to the Census 1891 is 16764, and the estimated population is 18000.

The following Table shows the number of Births
and Deaths during the last 26 years.

Date.	Population Census, 1871, 1881, 1891.	Estimated Population.	Total Births.	Total Deaths.	Mortality per 1000.
1874	13494	15000	866	479	31·813
1875	13494	17000	914	397	23·352
1876	13494	17000	818	337	19·256
1877	13494	15000	813	311	20·73
1878	13494	15000	636	351	16·73
1879	13494	15000	588	333	22·2
1880	13494	15000	614	338	22·53
1881	14456	14456	672	276	19
1882	14456	15000	676	277	18·4
1883	14456	15000	656	267	17·8
1884	14456	15000	742	329	21·93
1885	14456	17000	693	304	17·8
1886	14456	17000	646	238	14
1887	14456	16000	598	308	19
1888	14456	16000	575	281	17·5625
1889	14456	16000	609	278	17·375
1890	14456	17000	669	285	16
1891	16764	16764	736	359	21·4
1892	16764	16764	766	364	21·7
1893	16764	17000	816	351	20
1894	16764	17000	778	316	18
1895	16764	18000	837	410	22
1896	16764	18000	824	292	16·2
1897	16764	18000	784	322	17
1898	16764	18000	725	341	18
1899	16764	18000	741	401	22

The deaths are distributed over the year as follows :—

			Males.	Females.	Total.
WINTER QUARTER	{	January	- 14	16	30
		February	- 21	9	30
		March	- 16	20	36
SPRING QUARTER	{	April	- 14	9	23
		May	- 20	16	36
		June	- 21	11	32
SUMMER QUARTER	{	July	- 14	7	21
		August	- 17	19	36
		September	- 29	11	40
AUTUMN QUARTER	{	October	- 11	26	37
		November	- 18	18	36
		December	- 19	25	44

Deaths in the different quarters of the year exhibited in the following table.

	1886	1887	1888	1889	1890	1891	1892	1893	1894	1895	1896	1897	1898	1899
1st Quarter	66	61	76	74	78	89	103	82	76	99	83	102	71	96
2nd Quarter	50	76	60	54	60	96	103	75	87	119	71	77	90	94
3rd Quarter	66	90	63	85	52	81	71	107	70	106	69	72	101	97
4th Quarter	56	78	82	65	95	103	87	87	83	86	69	71	79	117

The greatest number of deaths were registered in March, May, September, and December.

The chief causes in March were deaths from Gastroenteritis and disease of respiratory organs ; in May from Whooping Cough ; in September from Gastroenteritis, and in December from Measles and disease of respiratory organs with Influenza.

ZYMOTIC DISEASES.

The following table shows the number of deaths attributed to Zymotic diseases during the last 25 years.

	1875	1876	1877	1878	1879	1880	1881	1882	1883	1884	1885	1886	1887	1888	1889	1890	1891	1892	1893	1894	1895	1896	1897	1898	1899
Typhus Fever	15	11	17	11	2	6	6	3	13	15	10	2	1	1	2	7	7	6	9	3	6	5	2	6	7
Typhoid Fever	17	10	15	2	89	31	1		9	6		3	3	9	5	2	2	7	6	1	10	6	2		2
Scarlet Fever																									
Rheumatic Fever	2	3	1	1			2	2			2	2	1	2	1	2	1		2	1	1	1	2		1
Gastroenteritis (Diarrhœa)	47	30	19	14	8	19	5	10	7	21	10	26	19	8	13	5	17	5	42	10	19	17	16	62	65
Cholera										1				4				2	2	1		2		1	
Croup	3	2	1	1	3		2		1	1	3		3	4	4	1		2	4	1	1				
Whooping Cough	26	16	6	6	13	14	1	6	10	6	6	1		7	5	11	10	5	12	5	11	7	6	1	9
Erysipelas	2	1			2	1		2		1				1	2	2	2		1	1	1	1	1		1
Measles	1	11	2			11				3	1		41	1	18	2	4	20	3	8	19	1	9		4
Puerperal Fever	4	4	2		2	5	2	1		1	3	3	4	5	2	1	1	8	2	1	1	1	2		1
Doubtful Sorts Continued			3				2	5	5						2				1						
Fever		4		1			1					1						2	1	1		1		1	
Diphtheria			3	3			21		1				2										1		
Smallpox																									
Total	117	92	69	39	119	88	43	30	46	55	35	38	75	42	64	33	40	55	85	33	67	41	40	74	91

The total miasmatic deaths are at the rate of 5 per 1000.

Deaths from Gastroenteritis	3·61 per 1000.
„ „ Typhoid Fever	0·38 „
„ „ Whooping Cough	0·5 „
„ „ Influenza	- 0·2 „
„ „ Measles	- 0·2 „

The two most fatal Zymotics during the year were Gastroenteritis and Typhoid Fever.

The majority of the deaths from Gastroenteritis occurred in the months of August, Sept., and October. The disease was prevalent all over the district at all ages, but was most fatal in children under one year of age.

SCARLET FEVER.

Thirteen cases were notified and two deaths registered during the year in the district.

The cases as a rule were mild, of the entire number only two succumbed to the disease, one at Cambois and the other at Choppington. The origin of the outbreak is obscure. The first germs in all probability were imported. I did everything in my power to isolate the patients, with the result that the disease was soon stamped out.

TYPHOID FEVER.

Typhoid Fever was prevalent at Bedlington Station, Barrington Colliery, Choppington Guide Post, Stakeford Village, and West Sleekburn Colliery.

Seven deaths were registered in the district.

At Bedlington Station the cases were unmistakably traced to a blocked drain. The outbreak at Barrington to an importation from another district and a blocked drain at the east end of the North Row. At Stakeford Village to the exhumation of an old sewer which had been blocked for a considerable time. After a searching investigation I could not get at the cause of the appearance of the disease at either Choppington or West Sleekburn.

DISEASES OF THE RESPIRATORY ORGANS.

Phthisis Pulmonalis (Pulmonary Consumption) was the cause of nineteen deaths, and Bronchitis, including Pneumonia, 57 deaths during the year.

It is entirely agreed among the medical profession that pulmonary consumption is not only preventable, but that the necessary means for its prevention are not difficult of application. Consumption is due to microbes which gain entrance to the human body almost exclusively in two ways, viz., the inhalation of tuberculous-sputum, which has become dry and converted into dust, and the milk of tuberculous cows.

The first danger may be entirely obviated by proper care in the disposal of sputum.

The second may be provided against in the first place by the general use of boiled milk, and better still by measures for the stamping out and prevention of tuberculous disease in cattle.

As the tubercle bacillus is very rapidly deprived of virulence by sunshine combined with fresh air, the importance of well lighted and well ventilated dwellings as an indirect means of prevention of tuberculosis cannot be overestimated.

Notification of cases of Consumption, with a view to disinfection of rooms occupied by them, is desirable.

I would here draw your attention to the fact which is of great importance, that prevention of pulmonary consumption will necessarily result in the prevention of other diseases produced by the same bacillus, such as Tubercular Meningitis, Glandular disease of the bowels, Tubercular glands of the neck, Spinal disease, and Hip joint disease.

It should be understood that the germs of the disease are contained in the expectoration or spit. If this is allowed to dry it may become diffused in the air as dust ; this dust being taken in with the breath is the ordinary means whereby consumption is communicated.

The National Association for the prevention of Pulmonary Consumption has issued the following directions for persons suffering from lung disease :—Do not spit on the floor of a workshop or dwelling house ; it is equally dangerous to spit into a handkerchief. The expectoration should always be received into a vessel containing some water, with a little chloride of lime dissolved in it. Such vessel should be emptied into the fire. They should be washed out daily with boiling water.

The handkerchiefs and sheets used by consumptive patients should be put into water (not set aside to dry) while waiting until they can be washed, and they should be thoroughly boiled.

It is not safe for any one to sleep in the same bed with a consumptive patient, but provided the above rules are observed it is not dangerous to sleep in the same room.

A bed which has been occupied by a consumptive patient should be purified before use by anyone else. The sheets and pillow-slips should be boiled.

Blankets are best disinfected by steeping for a few hours in solution of chloride of lime of the strength of one ounce to the gallon.

The same should be used to wash the bedstead. The mattress and pillows should be disinfected by heat, if possible, which can be done by applying to the surveyor ; exposure to sunlight is also recommended.

Consumptive persons should not kiss or be kissed on the mouth.

Those who suffer from consumption are often unduly afraid of taking cold and therefore keep themselves in close rooms. This is a fatal mistake ; the germs of consumption retain their vitality (or in other words their poisonous quality) for many months in a close atmosphere, but they are very rapidly destroyed by fresh air and sunlight. It is therefore in the highest degree important to keep the windows open constantly both at top and bottom—widely in the day time and a little at night. The patient must be out of the direct line of draught, and sufficiently clothed. A fire is a help to ventilation.

The patient should be, if possible, out of doors all day, even in winter. Mere cold weather is not to be dreaded, provided sufficient clothing is worn. Only fog or rain or falling snow should keep the patient indoors.

The rooms occupied by a consumptive patient should be kept free from dust; a damp duster should be frequently used to remove it. The floor and skirting should be rubbed every week with a cloth wet with solution of chloride of lime, one ounce to the gallon of water.

WHOOPIING COUGH.

Whooping Cough has caused nine deaths during the year.

INFANT MORTALITY.

The number of children registered as dying under one year of age in the whole district is 170, representing a death rate of 9·4 per 1000.

Mortality in 1875	...	...	...	162
„ 1876	..	...	...	122
„ 1877	...	...	...	102
„ 1878	...	...	...	75
„ 1879	...	...	...	83
„ 1880	...	...	..	106
„ 1881	...	...	...	84
„ 1882	...	...	...	84
„ 1883	..	...	...	81
„ 1884	...	...	...	111
„ 1885	...	...	...	99
„ 1886	...	...	...	84
„ 1887	...	...	...	90
„ 1888	...	...	...	81
„ 1889	...	...	...	81
„ 1890	...	...	...	93
„ 1891	...	...	...	150
„ 1892	...	...	...	114
„ 1893	...	..	...	148
„ 1894	..	..	...	120
„ 1895	...	...	...	154
„ 1896	...	...	...	118
„ 1897	...	...	...	113
„ 1898	...	...	...	140
„ 1899	...	...	...	170

MEASLES.

Two outbreaks of Measles, to which I have alluded in the first page of my report, occurred at Cambois in the Summer quarter, and at Choppington in Mid-Winter ; in both instances the schools were closed and disinfected.

SUMMARY.

The general death rate is 22 per 1000 to the middle of 1899, and the infant mortality under one year of age per 1000 births registered is 229.

Deaths under one year of age.	Deaths per 1000 births.
$\frac{170 \times 1000}{741 \text{ births.}}$	229

The Zymotic death rate is higher than in any previous year since 1876. This is chiefly due to deaths from Gastroenteritis (Diarrhœa).

And the birth rate is 41 per 1000.

SANITARY WORK.

HOSPITAL.

Three patients suffering from enteric fever have been treated at the hospital during the year.

NEW SEWERS

Have been laid in the following localities: Catholic Row, Freehold Terrace, Barrington Row, Guide Post, Cambois, East end, Bedlington. Sewers to new houses in course of erection: Shiney Row, Bedlington Station, Bank Top, Scotland Gate, and Whittle's School, Bedlington.

BEDS DISINFECTED AND DESTROYED.

Several beds which were soiled by the discharge from typhoid fever were disinfected by dry heat, and two totally destroyed.

BLOCKED DRAINS

Were cleared and re-laid at Bedlington Station, Stakeford Village, West Sleekburn, Barrington Colliery, Choppington Colliery, and at Whittle's School, Bedlington. Cases of typhoid and scarlet fever were notified at each of these localities.

DAMP HOUSES.

Two at Stakeford, two at Guide Post, and two at Scotland Gate were repaired and made fit for habitation. The houses near Mr. Hogarth's brick yard which I mentioned in my last report as being damp are now repaired and made habitable.

NOTIFICATION ACT.

The notification act is now in force.

RECOMMENDATIONS.

FILTER.

1st.—A sand filter.

WET ASHPITS.

2nd.—The ashpits at Shiney Row, Bedlington, Mechanics' Row, West Sleekburn, Barrington Colliery, and Guide Post often contain stagnant water, which is a nuisance injurious to health, and should at once have the attention of the Council.

OPEN GUTTER.

3rd.—The open gutter at West Sleekburn, which at present is utilised for carrying the water to flush the school closets, should be filled in, piped, and made to discharge into main sewer. The water-closets should be flushed from the mains.

PUBLIC SCHOOLS.

4th.—The schools in the entire district of Bedlingtonshire should be furnished with trough water-closets instead of the privy at present in use. The inlets of fresh air to the breathing zone of the school at Cambois are the ventilators beneath the floor. It is ground air and damp, and in all probability is impregnated with microbes, as it is well known to Biologists that in ground air where sunlight is excluded, microbes abound.

5th.—I would recommend that a short inlet shaft be made to pierce the wall about five feet above the floor, sloping upwards, with a valve to prevent draught.

6th.—All cases of pulmonary consumption should be notified, and when deaths are registered the houses ought to be disinfected.

I have the honour, Gentlemen,
to be your obedient servant,

DANIEL CARMICHAEL.

January 30th, 1900.

Instructions to the Heads of Families for the prevention of Infectious or Contagious Disease.

Milk.

1. As a preventative of disease all milk should be boiled or scalded before being used, more especially before being given to children.

Separation of the Sick.

2. As soon as any infectious or contagious disease appears separate the sick person from the rest of the family, and if possible place the sick person in a room at the top of the house ; first taking care to remove all carpets, curtains, and unnecessary furniture and clothing.

Ventilation of Sick Room and House.

3. Admit fresh air into the sick room by opening the upper sash of the window. Keep the fireplace open and light a fire should the weather permit. Fresh air should be freely admitted through all parts of the house by means of open windows and doors. The more air there is passing through the house the less likely is the disease to spread.

Disinfection of discharges.

4. The discharges passing from the bowels of the sick person should not be emptied into the privy or ashpit, but should be buried deeply in the soil of the garden. Where there is no garden such discharges should after disinfection be emptied into the drain. The surveyor of the district council supplies disinfectants when so requested.

Disinfection of utensils.

5. No cup, glass, spoon or other utensil used by the sick person should on any account be used by any other member of the family until thoroughly washed and disinfected.

Food and drink.

6. No food or drink that has been tasted by the sick person should be given to anyone else.

Disinfection of clothes.

7. All bed and body linen as soon as removed from the sick person should be disinfected and soaked in boiling water for at least two hours before washing.

Handkerchiefs not to be used.

8. Instead of handkerchiefs pieces of rag or paper should be used by the sick person, and when soiled should be immediately burnt.

Dress of those attending the sick.

9. Persons attending the sick should not wear woollen garments, as woollen garments are likely to retain and carry infection to others. Dresses of cotton are preferable.

Precautions as to visitors.

10. It is of great importance that neither the sick room nor any other part of the house should be frequented by any person with the exception of those in attendance on the sick, as the clothing of visitors is very liable to carry away infection.

Precautions during recovery.

11. The scales and dusty powder from the skin after scarlet fever and the crusts after smallpox are highly infectious. Persons recovering from those diseases should not be allowed to mix with the rest of the family until the skin is perfectly smooth.

Attendance of children at school.

12. Children residing in a house in which there is any infectious disease should not be allowed to go to school.

Danger of attending funerals.

13. Infection is so easily carried in the clothes that in the case of death from an infectious or contagious disease it is of the utmost importance that as few persons as possible should attend the funeral.

Any person who—

(1). While suffering from any dangerous infectious disorder wilfully exposes himself without proper precautions against spreading the said

disorder in any street, public place, shop, inn, or public conveyance, or enters any public conveyance without previously notifying to the owner, conductor, or driver thereof that he is so suffering ; or

(2). Being in charge of any person so suffering, so exposes such sufferer ; or

(3). Gives, lends, sells, transmits, or exposes, without previous disinfection, any bedding, clothing, rags, or other things which have been exposed to infection from any such disorder

is by law liable to a penalty not exceeding five pounds, and a person who, while suffering from any such disorder, enters any public conveyance without previously notifying to the owner or driver that he is so suffering may in addition be ordered by the Court to pay such owner and driver the amount of any loss and expense they may incur in carrying into effect the provisions of the Public Health Act with respect to disinfection of the conveyance.

By Order of the Bedlingtonshire Urban District Council.

DANIEL CARMICHAEL, F.R.C.S.E.,

Medical Officer of Health.